

Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

Initially, it is noted that new claims 15-17 have been added.

Claim 12 has been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

Claim 12 has been amended so as to recite that the arm portions are integrally formed with the body case. This amendment is supported by Figures 1a and 1b. As can be seen from these figures, the arm portions 4 seamlessly extend from the body case 3. Therefore, it is apparent that the arm portions 4 and the body case 3 are formed as a single piece (i.e., are integrally formed).

Claims 1 and 12-14 have been rejected under 35 USC §102(b) as being anticipated by Granzotto (U.S. 6,757,392). Claims 1 and 12-14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Granzotto, Granzotto in view of Reinhold, Jr. (U.S. 5,339,823), and Granzotto in view of Marangoni (US 4,535,783).

The above-mentioned rejections are respectfully traversed and submitted to be inapplicable to the claims for the following reasons.

Claim 1 is patentable over Granzotto, the combination of Granzotto and Reinhold, Jr. and the combination of Granzotto and Marangoni, since claim 1 recites an electrocardiograph including, in part, a switching means for starting detection, display and transmission of the electrocardiographic complex, wherein the switching means comprises push-down switches located in a common electrode and a pair of detecting electrodes, respectively, the switching means starting detection, display and transmission of the electrocardiographic complex after all of the push-down switches are pushed down in a push down state and the push down state of all of the push-down switches is maintained for a specific period by pressing the body case to a human body. Granzotto fails to disclose or suggest the switching means including push-down switches as recited in claim 1. Further, it would not have been obvious to combine the disclosures of either Granzotto or Reinhold, Jr. to meet the limitation of the switching means including push-down switches as recited in claim 1.

Granzotto discloses an electronic stethoscope including a headpiece 1 and earpieces 3 including bows 31. The headpiece 1 includes a contact ring 20 having a ring section 20a and two

arc shaped arms 18 having electrodes 17 connected to the ring section 20a by pivot joints 19. The pivot joints 19 are connected by switching contacts such that an electrical connection between the electrodes 17 and an evaluation unit occurs only if the arms 18 are in a fully swiveled-out position 18a. (See column 3, lines 23-36; column 3, line 41 – column 4, line 27; and Figures 1, 3 and 4).

In the rejection, the switching contacts connecting the electrodes 17 to the evaluation unit are relied upon as corresponding to the claimed push-down switches. However, the switching contacts connect the evaluation unit to the electrodes 17 upon extension of the arms 18 to the fully swiveled-out position 18a prior to placing the electronic stethoscope to a human body. On the other hand, claim 1 specifically recites that the switching means starts detection, display and transmission of the electrocardiographic complex after all of the push-down switches are pushed down in a push down state and the push down state of all of the push-down switches is maintained for a specific period by pressing the body case to a human body. Clearly, the switching contacts of Granzotto are not push-down switches as they connect the electrodes 17 to the evaluation unit upon extension of the arms 18, not when the switching contacts are “pushed-down”. It is clear that the rejection ignores the description of the claimed switches as “push-down” switches in making this comparison.

Further, the mention in the rejection that the evaluation unit begins to detect the electrocardiographic information when it is pushed against the skin does not address the failure of the switching contacts to be push-down switches. As explicitly disclosed in Granzotto, the switching contacts connect the electrodes 17 to the evaluation unit upon extension of the arms 18; not when the evaluation unit is pushed against the skin. Therefore, it is clear that the switching contacts do not correspond to the claimed push-down switches recited in claim 1. As a result, claim 1 is patentable over Granzotto.

As for the combination of Granzotto and Reinhold, Jr., Reinhold, Jr. discloses a portable heart monitor 10 including a left leg electrode LL, a right arm electrode RA and six precordial electrodes V1-V6. Reinhold, Jr. also discloses that the six precordial electrodes V1-V6 are retained in operative relation on the body via “human pressure” for an amount of time that is sufficient time to obtain electrical heart activity to form an ECG. (See column 24, lines 19-35 and Figure 2).

In the rejection, it is indicated that it would have been obvious to substitute the electrodes V1-V6 of Reinhold, Jr. for the electrodes 17 in Granzotto in order to meet the limitations of the switching means including push-down switches as recited in claim 1. However, it is submitted that it would not have been obvious to one of ordinary skill in the art to modify Granzotto in this manner.

As noted above, the electrodes 17 are mounted on the headpiece 1 by way of the arms 18 which are designed to swivel away from the headpiece 1 at the pivot joints 19 prior to use. It is apparent that the manner in which the arms 18 are attached to the headpiece 1 would prevent the electrodes 17 from being substituted with the electrodes V1-V6. That is, the fact that the arms 18 are designed to swivel from the headpiece 1 teaches away from the use of push-down switches for the electrodes 17 because of the additional stress that would be placed on the pivot joints 19 when activating the push-down switches. This additional stress could damage the pivot joints 19 and cause the arms 18 to break off from the headpiece 1. Further, it is apparent that it would not have been obvious to use the electrodes V1-V6 in place of the electrodes 17 because their use would be redundant with the switching contacts that connect the electrodes 17 to the evaluation unit. Therefore, it would not have been obvious to combine the electrodes V1-V6 of Reinhold, Jr. with the headpiece 1 of Granzotto. As a result, claim 1 is patentable over the combination of Granzotto and Reinhold, Jr.

As for the combination of Granzotto and Marangoni, Marangoni discloses a measuring electrode 7 having a cup or lid-shaped measuring head 14 with an arcuate top surface 15 adapted to be placed on a patient's skin. A pressure switch 21 is electrically connected between an output of an ECG amplifier and a recording device and is disposed inside of a wall part 20. When the electrode 7 and the wall part 20 actuate the pressure switch 21, the output of the ECG amplifier is connected to the recording device. (See column 3, line 66 – column 4, line 38 and Figures 4-5B).

In the rejection, it is indicated that it would have been obvious to substitute the pressure switch 21 for the electrodes 17 in Granzotto in order to meet the limitations of the switching means including push-down switches as recited in claim 1. However, it is submitted that it would not have been obvious to one of ordinary skill in the art to modify Granzotto in this manner.

As noted above, the electrodes 17 are mounted on the headpiece 1 by way of the arms 18 which are designed to swivel away from the headpiece 1 at the pivot joints 19 prior to use. It is apparent that the manner in which the arms 18 are attached to the headpiece 1 would prevent the electrodes 17 from being substituted with the pressure switch 21. That is, the fact that the arms 18 are designed to swivel from the headpiece 1 teaches away from the use of push-down switches for the electrodes 17 because of the additional stress that would be placed on the pivot joints 19 when activating the push-down switches. This additional stress could damage the pivot joints 19 and cause the arms 18 to break off from the headpiece 1. Further, it is apparent that it would not have been obvious to use the pressure switch 21 in place of the electrodes 17 because their use would be redundant with the switching contacts that connect the electrodes 17 to the evaluation unit. Therefore, it would not have been obvious to combine the pressure switch 21 of Marangoni with the headpiece 1 of Granzotto. As a result, claim 1 is patentable over the combination of Granzotto and Marangoni.

It is also noted that the electrocardiograph recited in claim 1 is designed so as to be used by the patient himself (i.e., to hang from the neck of the patient), as opposed to be used on the patient by another. During operation, if the patient begins feeling bad, he can press the electrocardiograph, which is hanging from his neck, directly against his chest to operate the electrocardiograph. On the other hand, with the stethoscope of Granzotto, the arms 18 have to be extended before the stethoscope can be placed against the patient's chest. Thus, it is apparent that the stethoscope of Granzotto is not designed to be used by the individual feeling bad (i.e., the patient).

As for claim 17, it is patentable over Granzotto, the combination of Granzotto and Reinhold, Jr., and the combination of Granzotto and Marangoni for reasons similar to those set forth above in support of claim 1.

Claims 4, 5 and 11 have been rejected under 35 USC §102(b) as being anticipated by Granzotto (U.S. 6,757,392). Claims 4, 5, 10 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Granzotto, Granzotto in view of Reinhold, Jr., and Granzotto in view of Marangoni and Reinhold, Jr.

Regarding claims 4, 5 and 11, they are submitted to be patentable over the references relied upon in the rejections at least based on their dependency from claim 1.

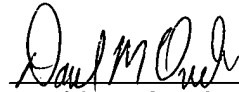
Because of the above-mentioned distinctions, it is believed clear that claims 1, 4, 5 and 11-17 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1, 4, 5 and 11-17. Therefore, it is submitted that claims 1, 4, 5 and 11-17 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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